

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
DIRK NUBER

Application No.: 10/540,376

Confirmation No.: 2736

Filed: January 17, 2006

Art Unit: 1793

For: FLUIDIZED BED METHOD AND PLANT  
FOR THE HEAT TREATMENT OF SOLIDS  
CONTAINING TITANIUM

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Examiner: M. L. Shevin

**INTERVIEW SUMMARY UNDER MPEP 713.04**

MS AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

October 15, 2009

Dear Sir:

In response to an Office Action dated May 13, 2009, a telephonic interview was conducted between Examiner Mark L. Shevin, acting on behalf of the United States Patent and Trademark Office, and Norman B. Thot, acting on behalf of the Applicant, on August 19, 2009. The Applicant thanks Examiner Shevin for the opportunity to discuss the objections raised with respect to the application.

The Applicant submitted with respect to claim 1 that one of ordinary skill would not have incorporated the reactor design of Hiltunen into the titanium ore (ilmenite) reduction process of Formanek because the Hiltunen reactor does not teach or suggest producing a solid. The Applicant stated that Hiltunen is limited to describing that its reactor is used to cool gas by repeatedly heating and cooling the same solid material and that Hiltunen also does not describe the production of any solid material; the solid material merely being recirculated. The Applicant

pointed out that the two conduits (54 and 56) in Hiltunen to add or remove a solid material are limited to volume regulation.

The Applicant further submitted that the Hiltunen reactor is specifically constructed to prevent any particles from leaving the reactor with the gas so that a combination of Formanek with Hiltunen would at best yield a system where ilmenite is used as a solid material to cool gas with no treated product being produced except for cooled exhaust gas.

The Applicant also submitted that one of ordinary skill in the art would not have incorporated the particle Froude number control means of Beisswenger, Reh or Schmidt into the titanium ore (ilmenite) reduction process of Formanek incorporating the Hiltunen reactor. The present application describes three specific Froude ranges for the annular fluidized bed, the gas supply tube and the mixing chamber. None of Beisswenger, Reh and Schmidt establish differing Froude ranges in different portions of the chamber and only describe broad general Froude ranges. Applicant submitted that Beisswenger, Reh and Schmidt cannot teach the differing Froude ranges because each of Beisswenger, Reh and Schmidt lack the feature of an annular fluidized bed required in the present application; Beisswenger, Reh and Schmidt only teach a circulating fluidized bed.

The Applicant agreed to the Examiner's cancelling claims 28-31 and 33-38 by an Examiner's amendment.

Dated: October 15, 2009

Respectfully submitted,

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